CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/GG/CSR-274f/CEMENT/2020-21 Date: 25.11.2020

TEST REPORT ON CEMENT

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of Work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
*Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
* Sample ID	:	Cement
Sample Received on	:	24.11.2020
Period of Testing	:	24.11.2020 to 25.11.2020
Report Issue Date	:	25.11.2020

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 269:2015
1	Standard Consistency	IS-4031 (Part -4) : 1988 (RA-2019)	29.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) : 1988 (RA-2019)	190Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) : 1988 (RA-2019)	385 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) : 1988 (RA-2019)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

Note:

⇒ The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Pooja K.L.

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

25.12.2020

Job No.: CTCE/BBMP/GG/CSR-274f/Cube/2020-21

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of the work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
* Sample ID	:	RCC Drain Raft Concrete
Test Method as per	:	IS - 516 : 1959 (RA-2018)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	25.12.2020
Report Issue Date	:	25.12.2020

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.11.2020	25.12.2020	8.123	476.3	21.17
2	27.11.2020	25.12.2020	8.321	485.2	21.56
3	27.11.2020	25.12.2020	8.147	498.7	22.16

*Information is furnished by the Customer/Representative.

Civil-Tech Consultants & Engineers Bangalore

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Pooja K.L.

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

Job No.: CTCE/BBMP/GG/CSR-274f/Cube/2020-21 — 28.12.2020

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of the work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
* Sample ID	:	RCC Drain Side Wall Concrete
Test Method as per	:	IS - 516 : 1959 (RA-2018)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	28.12.2020
Report Issue Date	:	28.12.2020

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	30.11.2020	28.12.2020	8.477	477.6	21.23
2	30.11.2020	28.12.2020	8.142	486.5	21.62
3	30.11.2020	28.12.2020	8.206	496.2	22.05

*Information is furnished by the Customer/Representative.

Civil-Tech Consultants & Engineers Bangalore

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Pooja K.L.

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

Job No.: CTCE/BBMP/GG/CSR-274f/Cube/2020-21

30.11.2020

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of the work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
* Sample ID	:	RCC Drain Side Wall Concrete
Test Method as per	:	IS - 516 : 1959 (RA-2018)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	30.11.2020
Report Issue Date	:	30.11.2020

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	02.11.2020	30.11.2020	8.298	504.9	22.44
2	02.11.2020	30.11.2020	8.496	499.3	22.19
3	02.11.2020	30.11.2020	8.201	489.7	21.76

*Information is furnished by the Customer/Representative.

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Pooja K.L.

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2015 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

Job No.: CTCE/BBMP/GG/CSR-274f/Cube/2020-21 30.11.2020

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of the work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
* Sample ID	:	RCC Drain Side Wall Concrete
Test Method as per	:	IS - 516 : 1959 (RA-2018)
Size of cubes	:	150mmx150mmx150mm
Cross Sectional Area	:	22500 mm^2
* Grade of Concrete	:	M_{20}
Compressive Strength as on	:	28^{th} day
Sample Received on	:	30.11.2020
Report Issue Date	:	30.11.2020

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	02.11.2020	30.11.2020	8.412	500.1	22.23
2	02.11.2020	30.11.2020	8.346	480.4	21.35
3	02.11.2020	30.11.2020	8.425	490.1	21.78

*Information is furnished by the Customer/Representative.

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Pooja K.L.

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.

Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com

e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2015 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/GG/WMM/Shape.T/2020-21 20.01.2021

TEST REPORT ON FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of Work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
* Sample ID	:	Wet Mix Macadam
Test Method as per	:	IS - 2386(Part 1) : 1963 (RA 2016)
Date of Testing	:	20.01.2021
Report Issue Date	:	20.01.2021

Sl.No.	Description	Result
1	Flakiness Index	12.85%
2	Elongation Index	13.47%
3	Combined Flakiness & Elongation Index	26.32%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 35%

Note:

⇒The report shall not be reproduced, except in full, without the written approval of the laboratory.

⇒The results indicated above are based on the tests carried out on the samples received in thelaboratory

⇒Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.

Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com

e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/GG/CSR-274f/QB(DBM)/2020-21 Dated: 04.02.2021

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
* Sample ID	:	Bitumen
Source/ Location	:	Hot Mix Plant, Bangalore.
Sample Received on	:	03.02.2021
Period of Testing	:	03.02.2021 to 04.02.2021
Report Issue Date	:	04.02.2021

The results of the tests conducted on the bitumen sample are as follows:

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013 (RA-2018) for VG 30
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2019)	49	Min. 45
2	Softening point (R & B), ^{0}C	IS :1205 -1978 (RA-2019)	51	Min. 47
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2019)	100	Min. 40
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2019)	298	Min. 220

* Information is furnished by the Customer/Representative

Civil-Tech Consultants & Engineers Bangalore

Note:

⇒ This test report shall not be reproduced except in full, without written approval of the laboratory.

⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Pooja K.L.

Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

Job No.: CTCE/BBMP/GG/DBM/Sp.Wa/2020-21 05.02.2021

TEST REPORT ON SPECIFIC GRAVITY AND WATER ABSORPTION TEST

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of the Work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
Test Method as per	:	IS - 2386(Part -3) : 1963 (RA-2016)
* Type of Mix	:	Dense Graded Bituminous Macadam
Date of Testing	:	05.02.2021
Report Issue Date	:	05.02.2021

Sl. No.	Details	Notation	Test Number			Mean Value
			Test 1	Test 2	Test 3	
1	Weight of aggregate suspended in water with the basket	W_1 g	2016	2017	2015	
2	Weight of basket suspended in water	W_2 g	750	750	750	
3	Weight of saturated aggregate in water	$(W_1 - W_2) = W_s$ g	1266	1267	1265	
4	Weight of saturated surface dry aggregate in air	W_3 g	2006	2008	2004	
5	Weight of water equal to the volume of the aggregate	$(W_3 - W_S)$ g	740	741	739	
6	Weight of oven dried aggregate	W_4 g	1998	1999	1997	
7	Specific Gravity	$W_4/(W_3-W_S)$	2.700	2.698	2.702	2.700
8	Apparent Specific gravity	$W_4/(W_4-W_S)$	2.730	2.731	2.728	2.730
9	Water Absorption	$((W_3-W_4)*100)/W_4$	0.40%	0.45%	0.35%	0.40%

Information is furnished by the Customer/Representative

Comments:

- Maximum allowable Aggregate Water absorption value for Dense Graded Bituminous Macadam is 2.0%

Note:

The report shall not be reproduced, except in full, without the written approval of the laboratory.

The results indicated above are based on the tests carried out on the samples received in the laboratory.

Any Query regarding the report must be reported within 30 days from the date of testing

M/s. Civil-Tech Consultants & Engineers

****

Pooja K.L.
Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory
An ISO 9001:2015 Certified Company
NABL - Accredited Laboratory as per ISO / IEC-17025 : 2017

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/GG/Stripping/2020-21 06.02.2021

TEST REPORT ON STRIPPING VALUEOF ROAD AGGREGATES (STATIC IMMERSION TEST)

* Customer	:	**Asst. Executive Engineer,** T Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	:	**Sri. G. Govind,** No.150, 1st Main Road, Sheshadripuram, opp. CTO Office, Bangalore-560020.
* Name of Work	:	Improvements to Roads and Drains in Krishnegowda layout and Nrupatunga Roads in Ward No.15, T Dasarahalli, BBMP, Bangalore.
* Reference	:	BBMP/DZ/AEE/T.D.S.D/PR:298:2020-21 Date:24.10.2020
Test Method as per	:	IS: 6241
* Type of Mix	:	Bituminous Concrete
Date of Testing	:	06.02.2021
Report Issue Date	:	06.02.2021

Type of binder : VG30
Percentage of binder used : 5.00% by wt.
Total weight of aggregate : 200 g
Total weight of binder : 10.00 g
Temperature of water-bath : 40° C

Observation Number	Stripping, Percentage	Average, Percentage	Average Retained Coating, %
1	3.2	3.20	96.80
2	3.3		
3	3.1		

Information is furnished by the Customer/Representative.

Comments:

Minimum allowable Aggregate retained coating for Bituminous Concrete is 95%

Note:

- The report shall not be reproduced, except in full, without the written approval of the laboratory.
- The results indicated above are based on the tests carried out on the samples received in the laboratory.
- Any Query regarding the report must be reported within 30 days from the date of testing.

****

M/s. Civil-Tech Consultants & Engineers

Pooja K.L.
Authorised Signatory

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagara, Bangalore-79.
Tele fax : 23223227, Cell : 93428 39190, Website : www.civiltechconsultants.com
e-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

Scanned by CamScanner